

IN THE CLAIMS:

Claim 7 is proposed to be amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (previously presented) A method for insulating or thermally protecting a rocket motor assembly, comprising:

providing a precursor material comprising at least one aromatic polyamide, the precursor material having a denier per fiber ranging from 1.5 denier per fiber to 3.0 denier per fiber; carbonizing the precursor material to form a reinforcement structure; impregnating the reinforcement structure with a resin matrix to form a rocket motor ablative material; and

using the rocket motor ablative material on a portion of a rocket motor assembly.

2. (previously presented) The method of claim 1, wherein providing a precursor material comprising at least one aromatic polyamide comprises providing a precursor material comprising carded and yarn-spun staple aramid fibers.

3. (previously presented) The method of claim 1, wherein providing a precursor material comprising at least one aromatic polyamide comprises providing a precursor material comprising yarn-spun aramid filaments.

4. (previously presented) The method of claim 1, wherein providing a precursor material comprising at least one aromatic polyamide comprises providing a precursor material comprising at least one member selected from the group consisting of aramid felt and aramid flock.

5. (previously presented) The method of claim 1, wherein using the rocket motor ablative material on a portion of a rocket motor assembly comprises applying the rocket motor ablative material as a bulk ablative material of an exit nozzle liner.

6. (previously presented) The method of claim 1, wherein using the rocket motor ablative material on a portion of a rocket motor assembly comprises applying the rocket motor ablative material as a bulk ablative material of a reentry vehicle nose cone.

7. (currently amended) A method for insulating or thermally protecting a rocket motor assembly, comprising:

providing a precursor material comprising at least one poly(meta-arylaramid), the precursor material having a denier per fiber ranging from 1.5 denier per fiber to 3.0 denier per fiber;

forming a reinforcement structure comprising the precursor material;

impregnating the reinforcement structure with a resin matrix to form a rocket motor ablative material; and

using the rocket motor ablative material on a portion of a rocket motor assembly.

8. (previously presented) The method of claim 7, wherein forming a reinforcement structure comprising the precursor material comprises forming the reinforcement structure comprising carded and yarn-spun staple aramid fibers.

9. (previously presented) The method of claim 7, wherein forming a reinforcement structure comprising the precursor material comprises forming the reinforcement structure comprising yarn-spun aramid filaments.

10. (previously presented) The method of claim 7, wherein forming a reinforcement structure comprising the precursor material comprises forming the reinforcement structure comprising at least one member selected from the group consisting of aramid felt and aramid flock.

11. (previously presented) The method of claim 7, wherein using the rocket motor ablative material on a portion of a rocket motor assembly comprises applying the rocket motor ablative material as a bulk ablative material of an exit nozzle liner.

12. (previously presented) The method of claim 7, wherein using the rocket motor ablative material on a portion of the rocket motor assembly comprises applying the rocket motor ablative material as a bulk ablative material of a reentry vehicle nose cone.

13. (previously presented) The method of claim 1, wherein providing a precursor material comprising at least one aromatic polyamide comprises forming the at least one aromatic polyamide into a yarn.

14. (previously presented) The method of claim 13, wherein providing a precursor material comprising at least one aromatic polyamide comprises structuring the yarn into a desired structure.

15. (previously presented) The method of claim 14, wherein providing a precursor material comprising at least one aromatic polyamide comprises carbonizing the desired structure.

16. (previously presented) The method of claim 7, wherein forming a reinforcement structure comprising the precursor material comprises forming the at least one poly(meta-arylaramid) into a yarn.

17. (previously presented) The method of claim 16, wherein forming a reinforcement structure comprising the precursor material comprises structuring the yarn into a desired structure.

18. (previously presented) The method of claim 17, wherein forming a reinforcement structure comprising the precursor material comprises carbonizing the desired structure.

19. (previously presented) The method of claim 1, wherein providing a precursor material comprising at least one aromatic polyamide comprises providing a precursor material comprising poly(meta-phenyleneisophthalamide).

20. (previously presented) The method of claim 7, wherein providing a precursor material comprising at least one poly(meta-arylaramid) comprises providing a precursor material comprising poly(meta-phenyleneisophthalamide).